

SDG 9

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

Industrialization, infrastructure and clean technology: at the heart of structural transformation but blocked by binding constraints in the international free trade regime

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The incorporation into the SDGs of inclusive and sustainable industrialization, as well as infrastructure, is a significant achievement for countries of the global South. SDG 9 includes targets to develop regional and transborder infrastructure, raise industry's share of employment and GDP, doubling its share in least developed countries, greater adoption of clean technology and industrial processes and upgrading technological capabilities, innovation and research and development.

Such structural transformation processes were central to economic development policies up to the mid-1970s, focused on productive capabilities, sustained investments in technological and industrial capacities and strategic economic diversification, alongside specialization and exports. However, since the late 1970s the neoliberal model of macroeconomic stability and liberalized markets and borders has downplayed structural transformation and industrial development in favour of export specialization. This model holds that as long as an economy is open to international trade, comparative advantage international competition and privatization will direct capital, labour and material resources to where their contribution to GDP is maximized.¹

However, reality has proven different. In sub-Saharan Africa, for example, preferential trade schemes with developed countries, such as 100 percent duty-free quota-free market access by the EU and 60 percent by China, have absorbed a large share of Africa's exports but have done little to help Africa industrialize. The proportion of manufactured goods exported by African LDCs is extremely marginal and did not improve or diversify over 2000-2012 due to the fact that most exports are concentrated in fuels, ores and metals.²

In all developed countries, the state has played a proactive role, by nurturing enterprises, building markets, encouraging technological upgrading, strengthening capabilities, removing infrastructural bottlenecks, reforming agriculture and providing finance. Developing countries have argued that no country has developed without advances in industrialization and productivity, driven by managed investment (both foreign and domestic) and technology.

UN Member States, in agreements such as the Lima Declaration (1975, 2013) and the Istanbul Programme of Action (2016), recognize that industrialization drives development and job creation and thereby

¹ Cf. UNCTAD / ILO (2014).

² Cf. UNECA (2015).

contributes to poverty eradication, gender equality, youth employment, social inclusion and education, among other goals.

The MDGs, which were essentially an aid agenda for poorer countries driven by donor agencies, included no mention of infrastructure or industrialization. The SDGs, while far from ideal, integrate the need for structural transformation, and are universal, obliging all UN Member States to achieve their targets. As such despite the lack of sufficient means of implementation (MOI), they are an advance in global development policy-making.

Infrastructure

At the heart of structural transformation for economic development is national and regional infrastructure, as outlined in Target 9.1, which also specifies affordability and equitable access for all. In the least developed countries (LDCs), limited physical infrastructure, including electricity, water and sanitation, transport, institutional capacity and information and communications technology, is one of the major challenges to development.³ While an inclusive process of consultation and national planning should determine what specific types of infrastructure will best achieve social and economic development (e.g., highways or rural roads), the fundamental implementation challenge for Target 9.1 is financing. Three primary sources of infrastructure investment are official development assistance (ODA), particularly in LDCs, private sector capital and public funds. The sole MOI for infrastructure is Target 9.a, which uses the relatively weak language of “enhanced financial, technological and technical support” without specifying how much and what kind of support.

Likewise, the sole indicator for Target 9.a measures the amount of total ODA that goes to infrastructure. While ODA flows to LDCs are still less than half of the 0.15-0.20 percent of GNI agreed to by developed countries, the bulk of ODA is directed to social sectors, not to building physical and economic infrastructure.⁴

Meanwhile, the primary means of infrastructure financing is through public-private partnerships (PPPs), partnerships between the state and private sector where the upfront financing and implementation is carried out by the private sector while increased costs, risks and liabilities are often borne by the public sector. They have become the status quo vehicle for the World Bank Group, the BRICS New Development Bank, the Asian Infrastructure Investment Bank, the European Investment Bank and the Chinese and Brazilian national development banks.

While Target 9.1 does not mention PPPs, multi-stakeholder partnerships are promoted under SDG 17, on means of implication (Targets 17.16 and 17.17). Nowhere is there a mention of the disproportionate risks and costs of PPPs to the public sector, which exacerbate inequalities and decrease equitable access to services, including infrastructure.

Various studies have shown these risks, which include:⁵

- PPP financing costs are higher than public costs due to higher interest rates involved in private sector borrowing;
- Debt and fiscal risks, or contingent liabilities, of PPPs are often poorly accounted for, while the public sector must take ultimate responsibility when a project fails or if the private partner goes bankrupt or abandons the project;
- Social and environmental regulation and enforcement, such as workers’ and women’s rights, tax regulation, transparency rules, and environmental safeguards, are often lacking in PPPs;
- Government budgets are constrained by payments required over longer PPP contractual periods (25–30 years in some cases), compared to conventional service contracts (e.g., for refuse collection,

³ Cf. UNCTAD (2006).

⁴ Cf. UN (2011), para. 22.

⁵ Cf. Callan / Davies (2012), Estache / Philippe (2012), Hall (2015).

3–5 years), from higher transaction costs⁶ and from legal constraints against payment reduction schemes.⁷

The appropriateness of the proposed indicators is also questionable. Indicator 9.1.1 measures the “share of the rural population who live within 2 km of an all-season road,” and indicator 9.1.2 measures “passenger and freight volumes, by mode of transport.”⁸ However, Target 9.1 is unlikely to be achieved directly or indirectly from the presence of roads and vehicles. Relevant indicators would include, for example, number of decent work jobs created locally by infrastructure projects, density of health and educational infrastructure projects per capita, and a focus on affordability for the most vulnerable and marginalized in society, including women in the care economy and unemployed and homeless people.

Target 9.5 calls for enhancing scientific research and upgrading the technological capabilities of industrial sectors, Target 9.b calls for support to domestic technology development, research and innovation in developing countries and the proposed indicator 9.5.1 measures research and development expenditure as a percentage of GDP. All three sections of SDG 9 allude to the scaling up of financial resources, public, private, domestic and international. However, recent reports show that 132 countries, across all levels of development, are expected to shrink public budgets even further in 2016 than in other years since the global financial crisis that began in 2007–2008.⁹

By 2020 austerity measures are estimated to impact more than two-thirds of all countries and more than

6 billion people, or 80 percent of the human population.¹⁰ Austerity measures include cuts and caps to the public wage bill, reducing social safety nets and welfare benefits, reforming pensions, reducing or removing public subsidies, privatization, taxing public consumption and services and lowering wages. The weakness of the SDGs in establishing time-bound MOI commitments to scale up international financial resources for the global South, especially LDCs, may well undermine the ability of these countries to address the key goals on structural transformation under these circumstances.

Industrialization

The core of SDG 9 is Target 9.2, which promotes inclusive and sustainable industrialization, and includes three key targets to raise industry’s share of employment and gross domestic product (GDP) by 2030 and to double their share in LDCs.

It is widely recognized that manufacturing activity is positively correlated with GDP and skilled employment, and has a multiplier effect on job creation, as every one job in manufacturing creates 2.2 jobs in other sectors.¹¹ The proposed indicators for this target, manufacturing value added (MVA) and employment as a percentage of GDP, are thus appropriate and relevant.

However, missing in the targets is anything to reduce the constraints developing countries face if they implement the same industrial policies used historically by developed countries. These include infant industry protection and regulations on foreign investment (including performance requirements and local content sourcing) that help domestic enterprises upgrade their technology and labour skills, and increase their domestic value-added (which increases demand for labour and output of other enterprises).¹²

These critical policy tools are increasingly prohibited through legally binding free trade agreements (FTAs),

6 According to data from the European Investment Bank total transaction costs for PPPs can average over 20 percent of the total project value. Contract disputes may further increase these, as “the development of quasi-markets has already led to a contractual playground for lawyers and legal firms.” Quoted in Hall (2010), p. 5.

7 Hall (2015) p. 35 mentions that annual payments to two major road PPPs in Portugal cost 800 million Euros, more than the annual national transport budget of 700 million Euros.

8 Cf. UN Doc. E/CN.3/2016/2/Rev.1;(http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-SDGs-Rev1-E.pdf).

9 Cf. Ortiz et al. (2015).

10 Ibid.

11 Cf. <https://sustainabledevelopment.un.org/?menu=1300>.

12 Cf. Chang / Green (2003).

bilateral investment treaties (BITs) and to a lesser degree, the Agreement on Trade-Related Investment Measures (TRIM) in the World Trade Organization (WTO).

Trade and investment agreements with the U.S. and Canada in particular limit the use of performance requirements by developing countries. Out of 20 US FTAs currently in force, all but two prohibit performance requirements under the investment chapter.

The ability of states to manage foreign investment through performance requirements is crucial for the following purposes:

- promoting domestic manufacturing capabilities in high-value added sectors or technology-intensive sectors;
- stimulating the transfer or indigenous development of technology;
- promoting small and medium-sized enterprises and their contribution to employment creation;
- stimulating environment-friendly methods or products;
- promoting purchases from disadvantaged regions in order to reduce regional disparities; and
- increasing export capacity in cases where current account deficits would require reductions in imports.

FTAs and BITs also extend pre-establishment rights to investors, guaranteeing the right to establish, acquire and expand investments with the same treatment accorded to domestic investors. Some investment treaties also include employment clauses that guarantee foreign investors the right to employ staff of any nation without interference from the host state, thereby constraining the right to development.¹³

Small-scale industrial enterprises

Access to financial services and affordable credit for small-scale industrial and other enterprises, called for in Target 9.3, are measured by two indicators that specify the share of small-scale industries in total industry value-added and with a loan or line of credit. Given that small businesses engaged in industrial manufacturing account for over 90 percent of global business and between 50–60 percent of global employment, access to credit and services is critical. However, again, the roadmap for how to get there is absent. There is nothing about the role of national development banks, state banks and local cooperatives that have historically provided credit and financial services to small businesses. Meanwhile, financial services liberalization under the aegis of FTAs, BITs and the WTO expands the role of multinational banks that lack the mandate or the capacity to ensure affordable credit for small businesses with greater risk profiles than bigger businesses.

A key threat to the survival of small-scale enterprises is the provision of equal treatment to foreign and domestic businesses, under the Trans-Pacific Partnership Agreement (TPPA) and the Transatlantic Trade and Investment Partnership (TTIP). Under the TTIP, for example, the UK reservation of 25 percent of supplier contracts for industrial SMEs may be rendered illegal.¹⁴ The SME Association of Malaysia estimates that the TPPA is likely to force out at least 30 percent of Malaysia's 650,000 small and medium enterprises that cannot compete internationally with multinational enterprises. Primarily concentrated in local businesses (81%) rather than exports (19%), if foreign products overtake domestic markets small businesses have nowhere to go.¹⁵

Global value chains

Target 9.3 also calls for the integration of small-scale industrial and other enterprises into value chains and markets. However, with regard to global value chains (GVCs), not all enterprises can gain. The great-

¹³ Cf. South Centre (2015).

¹⁴ Cf. Kennedy (2015).

¹⁵ Cf. Foon (2015).

er the technological, manufacturing, service capacities, the larger the firm size, ability to meet international market standards and the level of managerial expertise, among other criteria, determine the ability of a firm to succeed in GVCs.

Currently, 67 percent of global value added occurs in developed countries, with only 9 percent in China, 5 percent in Russia, Brazil and India and 8 percent in all LDCs.¹⁶ Lead firms, the vast majority from developed countries, retain high-value added activ-

¹⁶ Cf. UNCTAD (2007).

ities, such as research, innovation, design, sales and marketing, in their home countries, while outsourcing low-value added activities, such as raw materials and assembly line processing, to developing countries. Rather than integrating into value chains, small-scale industrial firms in developing countries need to deepen their production capacities in order to garner a bigger share of the value added,¹⁷ for which domestic or regional markets often offer better opportunities.

¹⁷ Cf. South Centre (2013).

Targets for SDG 9

- 9.1** Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all
- 9.2** Promote inclusive and sustainable industrialization and, by 2030, significantly raise industry's share of employment and gross domestic product, in line with national circumstances, and double its share in least developed countries
- 9.3** Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets
- 9.4** By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
- 9.5** Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending
- 9.a** Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States
- 9.b** Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities
- 9.c** Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

Clean Technology

Target 9.4 calls for greater adoption of clean and environmentally sound technologies and industrial processes and increased resource efficiency. The fact that technology-dependent growth accounts for approximately 80 percent of the income divergence between rich and poor countries since 1820 indicates that developing countries require increased access to technology, including through concessionary and preferential terms. The key structural obstacle to technology transfer is the international intellectual property rights regime, which is entrenched in trade agreements and the WTO and prevents developing countries from being able to use existing technology without onerous royalty payments. In this regard, the Technology Facilitation Mechanism created at the 3rd International Conference on Financing for Development in Addis Ababa, has the potential to support developing countries' concrete technology needs.

The development of renewable and clean energy in the South is already being undermined by a recent WTO panel ruling that struck down India's efforts to develop domestic solar energy on the ground that they violated India's national treatment obligations under the General Agreement on Tariffs and Trade (GATT) 1994 and the WTO TRIMs agreement. India argued that under the Paris Agreement on Climate Change (2015), it had an obligation to ensure the adequate supply of clean electricity generated from solar power at reasonable prices in order to mitigate climate change and achieve sustainable development.¹⁸ Developing country efforts to secure unrestricted access to technology transfer in the Paris negotiations were also defeated.

Given such power imbalances in international agreements, how are developing countries, even when political will is mobilized, supposed to develop renewable energy for the goal of cleaner industrial processes? Without a cleaner industrialization model, how is the "sustainable" part of the SDGs to be taken seriously?

Conclusion

The structural challenges surrounding industrial policy tools and clean technology are undeniably daunting. At the same time, a diversified, dynamic, inclusive and sustainable industrialization is at the very heart of structural transformation, without which the SDG paradigm remains a patchwork of goals that do not address domestic growth, job creation and local self-sufficiency. Indeed, SDG 9 is at the center of the transformative potential of the SDGs, on par with SDG 10 on inequality and SDG 17 on MOI. The substantive integration of industrialization, which would not have been possible in the formulation of the MDGs, is evidence that the SDGs, while far from perfect, has the potential to address the right to development through structural transformation, where the poorest nations and communities have the opportunity to develop their economies on a foundation of equity, human rights and ecological sustainability.

¹⁸ Cf. Kanth (2016).

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